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Baker Botts L.L.P.
Suite 600
2001 Ross Avenue
Dallas, TX 75201-2980

EXAMINER	
PHAN, TRI H	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 10/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/918,154	DORBOLO, RICCARDO G.	
	Examiner	Art Unit	
	Tri H. Phan	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-11,14-28,31-38 and 41-47* is/are pending in the application.

4a) Of the above claim(s) *3,4,12,13,29,30,39 and 40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1,2,5-11,14-28,31-38 and 41-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/06/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on June 28th, 2005. Claims 3-4, 12-13, 29-30, and 39-40 are now canceled. Claims 1-2, 5-11, 14-28, 31-38 and 41-47 are now pending in the application.

Claim Objections

2. Claims 18-19 and 38 are objected to because of the following informalities:

In claim 18, line 4, the word "a" in front of the phrase "transmitting interface" should be correct to -- the --; and insert the word "first" or "second" in front of the phrase "transmitting interface" for clarity with the predefined "first transmitting interface" or "second transmitting interface" in the base claim 11, lines 7-8.

In claim 19, line 1, the word "a" in front of the phrase "second transmitting interface" should be correct to --- the --- for clarity, with the predefined "second transmitting interface" in the base claim 11, line 8.

In claim 38, line 5, insert the end period at the end of the claim for clarity, because the claim must end with a period for a clearly state.

In claim 9, lines 3 and 6, the limitation "a communication standard" recites in the claim appears to be unclear which "standard" is used; and the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

Same objection's reason for the limitation "communication standard" recited in claims 18, 25, 35, and 45.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 5-11, 14-28, 31-38, and 41-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Russell et al.** (U.S.6,496,519; hereinafter refer as '**Russell**') in view of **Nguyen et al.** (U.S.6,594,279; hereinafter refer as '**Nguyen**').

- In regard to claims 1, 11, 27, and 37, **Russell** discloses in Figs. 1-11 and in the respective portions of the specification about the method of claim 1, the systems of claims 11, and 27, the logic encoded media of claim 37 (col. 7, lines 42-45) for data transmission. Russell further discloses, *means* (figure 2, elements 200 and 203) *for generating a plurality of synchronous transport signal streams* (figure 2, element 200 where the Ethernet data is packaged into SONET frames so therefore there are synchronous transport streams with Ethernet and SONET data); *means for determining the destination associated with each one of the plurality of synchronous transport signal streams between a first transmitting interface and a second*

transmitting interface (figure 9, multiplexers "4XE" and "IXE" as disclosed in col. 9, lines 33-42 are used to communicate or determine to which endpoint or "*destination*" the data is to be transmitted; and where the destination address must be found in the frame since the multiplexers must know where the data is to be sent); *means for recording the destination in the overhead of the associated one of the plurality of synchronous transport signal streams* (figure 4, where the overhead section must contain the destinations because the multiplexers must know where the data is to be sent and this is found in the destination); *and means for routing each one of the plurality of synchronous transport signal streams according to the associated destination* (figure 2, element 200 as described in col. 8, lines 13-22 where the output of the multiplexer is sent across the network to the destination endpoints).

However, **Russell** lacks to explicitly disclose what **Nguyen** teaches, wherein the method of "*conducting a negotiation for the destination*" between the first and second transmitting interfaces (figures 1-2, col. 6, lines 53-57 wherein the negotiation request for establishing the connection between the source node and the destination node is disclosed in col. 5, line 61 through col. 6, line 12).

It would have been obvious to one with ordinary skill in the art at the time of invention to include the method for "*conducting a negotiation for the destination*". The motivation for conducting the negotiation is so that the data transport can guarantee with quality of service and deterministic end-to-end delay as disclosed in **Nguyen**: col. 3, lines 56-62.

- Regarding claims 2, 28 and 38, in addition to features in base claims 1, 27, and 37 (see rationales pertaining the rejection of base claims 1, 27, and 37 discussed above), **Russell** further

discloses wherein *means for generating the plurality of synchronous transport signal streams is operable to generate the plurality of synchronous transport signal streams at a transmitting interface* (figure 2, element 200) *and further comprising means for transmitting the synchronous transport signal streams to a switch* (figure 5, where data from element 503 is transmitted to switch element 505).

- In regard to claims 5, 14, 31, and 41, in addition to features in base claims 1, 11, 27, and 37 (see rationales pertaining the rejection of base claims 1, 11, 27, and 37 discussed above), **Russell** further discloses wherein *means for recording the destination in the overhead of the associated one of the plurality of synchronous transport signal streams is operable to record the destination in a field of a transport overhead of the associated one of the plurality of synchronous transport signal streams* (figure 4, where the overhead section must contain the destinations because the multiplexers must know where the data is to be sent and this is found in the destination). It notes that **Nguyen** also teaches the source and destination are recorded in the request message frame as disclosed in col. 5, line 61 through col. 6, line 12.

- Regarding claims 6, 15, 32, and 42, in addition to features in base claims 1, 11, 27, and 37 (see rationales pertaining the rejection of base claims 1, 11, 27, and 37 discussed above), **Russell** further discloses about *determining the destination from the overhead of the associated one of the plurality of synchronous transport signal streams* (figure 9, multiplexers "4XE" and "IXE" are used to negotiate to which endpoint the data is to be transmitted) *and configuring a*

switch to route the associated one of the plurality of synchronous transport signal streams to the destination (figure 2, element 202 as described in col. 7, line 52 through col. 8, line 9).

- In regard to claim 21, **Russell** discloses in Figs. 1-11 and in the respective portions of the specification about the *switch for switching data streams* (figure 5, element 503 as detailed in figure 2 which also acts as a switch), *which comprises an input operable to receive a plurality of synchronous transport signal streams* (figure 5), *each of the plurality of synchronous transport signal streams comprising an overhead recording a destination* (figures 4-5, where the overhead section must contain the destinations because the multiplexers must know where the data is to be sent and this is found in the destination); *a monitor coupled to the input and operable to receive the plurality of synchronous transport signal streams from the input and to determine the destinations recorded in the overheads* (figure 2, element 201 as described in col. 7, lines 34-45 where the device is working to put the Ethernet data into the SDH virtual containers and send across the network to the destination endpoints as described in col. 8, lines 13-22), *a control module coupled to the monitor, the monitor operable to reconfigure the control module to route each of the plurality of synchronous transport signal streams to the destination recorded in the associated overhead (*figure 2, element 202 as described in col. 7, line 52 through col. 8, line 9 where the device is adapted data frames into corresponding data rate channel).

However, **Russell** lacks to explicitly disclose what **Nguyen** teaches, wherein the method of "*conducting a negotiation for the destination*" between the first and second transmitting interfaces (figures 1-2, col. 6, lines 53-57 wherein the negotiation request for establishing the

connection between the source node and the destination node is disclosed in col. 5, line 61 through col. 6, line 12).

It would have been obvious to one with ordinary skill in the art at the time of invention to include the method for "*conducting a negotiation for the destination*". The motivation for conducting the negotiation is so that the data transport can guarantee with quality of service and deterministic end-to-end delay as disclosed in **Nguyen**: col. 3, lines 56-62.

- Regarding claim 22, in addition to features in base claim 21 (see rationales pertaining the rejection of base claim 21 discussed above), **Russell** further discloses about *the multiplexer coupled to the control module and operable to multiplex the plurality of synchronous transport signal streams* (figs. 2 and 9 as described in col. 6, lines 65-67).

- In regard to claims 7, 8, 16, 17, 23, 24, 33, 34, 43 and 44, in addition to features in base claims 1, 11, 21, 27, and 37 (see rationales pertaining the rejection of base claims 1, 11, 21, 27, and 37 discussed above), **Russell** further discloses about the method for *determining a destination interface from the destination recorded the overhead of the associated one of the plurality of synchronous transport signal streams* (figure 9, multiplexers "4XE" and "IXE" as disclosed in col. 9, lines 33-42 are used to communicate or determine to which endpoint or "*destination*" the data is to be transmitted; and where the destination address must be found in the overhead section since the multiplexers must know where the data is to be sent) *and transmitting the associated one of the plurality of synchronous transport signal streams to the*

destination interface (figure 2, element 200 as described in col. 8, lines 13-22 where the output of the multiplexer is sent across the network to the destination endpoints).

Russell also discloses about the time division system for transport data as described in col. 5, lines 52-55; but lacks to explicitly disclose what **Nguyen** teaches about the *determining a time slot from the destination recorded in the overhead of the associated one of the plurality of synchronous transport signal streams* (fig. 2, col. 6, line 65 through col. 7, line 5; wherein the destination address is provided in channel 16 in the over head section of the frame as described in fig. 2, col. 5, line 61 through col. 6, line 12) *and inserting the associated one of the plurality of synchronous transport signal streams in the time slot of an outgoing synchronous transport signal stream* (fig. 2, col. 6, line 65 through col. 7, line 24).

It would have been obvious to one with ordinary skill in the art at the time of invention to include the method for "*determining the time slot from the destination recorded in the overhead of the associated one of the plurality of synchronous transport signal streams for inserting into the synchronous transport signal streams of an outgoing synchronous transport signal stream*". The motivation for that is so either the source or destination may negotiate for adjustment of bandwidth allocation as described in col. 7, lines 24-30; where the data transport can guarantee with quality of service and deterministic end-to-end delay as disclosed in **Nguyen**: col. 3, lines 56-62.

- Regarding claims 9, 18, 25, 35, and 45, in addition to features in base claims 1, 11, 21, 27, and 37 (see rationales pertaining the rejection of base claims 1, 11, 21, 27, and 37 discussed above), **Russell** further discloses wherein *each of the plurality of synchronous transport signal*

streams comprises data based on a communications standard (figure 2, SONET and Ethernet) *and the means for generating each of the plurality of synchronous transport signal streams is operable to generate each of the plurality of synchronous transport signal streams at an interface based on the communications standard* (figure 2, elements 200 and 203 where each receive and transmit data based on the corresponding communication standard).

- In regard to claims 10, 20, 26, 36, and 46, in addition to features in base claims 1, 11, 21, 27, and 37 (see rationales pertaining the rejection of base claims 1, 11, 21, 27, and 37 discussed above), **Russell** further discloses wherein *each of the plurality of synchronous transport signal streams comprises a synchronous transport signal-level* 1 *stream* (figure 3, C-4, C-3, etc.) *and further comprising means for multiplexing the synchronous transport signal-level 1 streams to yield a synchronous transport signal-level* n *stream* (figure 3, STM-N where the signals are all multiplexed into the STM-N stream).

- Regarding claim 19, in addition to features in base claim 11 (see rationales pertaining the rejection of base claim 11 discussed above), **Russell** further discloses about *generate the plurality of synchronous transport signal streams* (figure 2, element 200 where the Ethernet data is packaged into SONET frames so therefore there are synchronous transport streams with Ethernet and SONET data); *determine a destination and record the destination in an overhead of the associated one of the plurality of synchronous transport signal streams* (figures 2 and 9, multiplexers "4XE" and "1XE" are used to negotiate to which endpoint the data is to be

transmitted and this information must be recorded in the overhead content of the SONET packet as seen in figure 4).

- In regard to claim 47, **Russell** discloses in Figs. 1-11 and in the respective portions of the specification about the system for switching data streams, which comprises *a plurality of transmitting interfaces, at least one transmitting interface comprising an Ethernet interface, at least one transmitting interface comprising a SONET interface* (figure 2, elements 200 and 203), *each transmitting interface operable to generate a plurality of synchronous transport signal streams, at least one synchronous transport signal stream comprising Ethernet data, at least one synchronous transport signal stream comprising SONET data* (figure 2, element 200 where the Ethernet data is packaged into SONET frames so therefore there are synchronous transport streams with Ethernet and SONET data); *negotiate with a destination interface of a plurality of destination interfaces to determine a destination associated with each synchronous transport signal stream* (figure 9, multiplexers "4XE" and "IXE" as disclosed in col. 9, lines 33-42 are used to communicate or negotiate to which endpoint or "*destination*" the data is to be transmitted; and where the destination address must be found in the frame overhead since the multiplexers must know where the data is to be sent) *and record the destination in a transport overhead of the associated synchronous transport signal stream* (figure 4, where the destination address must be found in the overhead section since the multiplexers must know where the data is to be sent) *and a switch coupled to the transmitting interfaces* (figure 5, element 503 as detailed in figure 2 which also acts as a switch) *and comprising an input operable to receive the synchronous transport signal streams* (figure 5), *a monitor coupled to the input and operable to*

receive the synchronous transport signal streams from the input, and to determine a destination interface from the destination recorded in the transport overhead of a synchronous transport signal stream (figure 2, element 201 as described in col. 7, lines 34-45 where the device is working to put the Ethernet data into the SDH virtual containers and send across the network to the destination endpoints as described in col. 8, lines 13-22); *a control module coupled the monitor, the monitor operable to reconfigure the control module* (figure 2, element 202 as described in col. 7, line 52 through col. 8, line 9) *and a multiplexer coupled to the control module and operable to receive a routing instruction from the control module, and to transmit the synchronous transport signal stream to the destination interface* (figure 2, element 200 as described in col. 8, lines 13-22 where the output of the multiplexer is sent across the network to the destination endpoints).

Russell also discloses about the transporting data in the time division system as described in col. 5, lines 52-55; but lacks to explicitly disclose what **Nguyen** teaches wherein *the monitor* (wherein the BWM and BWC are used for monitoring the volume of data traffic as disclosed in col. 9, lines 1-3) *is operable to determine a time slot* (fig. 2, col. 6, line 65 through col. 7, line 5; wherein the destination address is provided in channel 16 in the over head section of the frame as described in fig. 2, col. 5, line 61 through col. 6, line 12) *and the multiplexer* (interface bridge, col. 3, line 53-56) *is operable to insert a synchronous transport signal stream in the determined time slot of an outgoing synchronous transport signal stream* (fig. 2, col. 6, line 65 through col. 7, line 24).

It would have been obvious to one with ordinary skill in the art at the time of invention to include the monitor for "*determining the time slot and inserting into the synchronous transport*

signal stream into the determined time slot of an outgoing synchronous transport signal stream". The motivation for that is so either the source or destination may negotiate for adjustment of bandwidth allocation as described in col. 7, lines 24-30; where the data transport can guarantee with quality of service and deterministic end-to-end delay as disclosed in **Nguyen**: col. 3, lines 56-62.

Response to Amendment/Arguments

5. Applicant's arguments filed on June 28th, 2005 with respect to claims 1-2, 5-11, 14-28, 31-38, and 41-47 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaguchi, Atsuki (U.S.6,496,518) and **Gonda, Rumi S.** (U.S.2003/0056017) are all cited to show devices and methods for improving the optical transmission in the telecommunication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BRIAN NGUYEN
PRIMARY EXAMINER

Tri H. Phan
October 19, 2005